Research Proposal: Developing an Accessible Digital Editor for Sudan Khartoum Media Ecosystem

# Research Proposal: Designing and Implementing a Context-Aware Digital Editor for Media Professionals in Sudan Khartoum

## Abstract

This research proposal outlines a critical investigation into the development of an accessible, localized digital editor tailored to the unique socio-technical landscape of Sudan Khartoum. With over 70% of media professionals in Khartoum reporting chronic challenges with existing content creation tools—including poor Arabic language support, unreliable internet connectivity, and high software costs—the proposed study aims to design an offline-first editorial platform that bridges these gaps. Utilizing mixed-methods research grounded in participatory design principles with Khartoum-based journalists, this project will deliver a functional prototype within 18 months, directly addressing Sudan’s urgent need for sustainable media infrastructure. The expected outcome is a scalable editor framework that empowers local storytelling while advancing digital equity in one of Africa’s most dynamic yet under-resourced urban media hubs.

## 1. Introduction: The Imperative for a Khartoum-Centric Editor

Sudan Khartoum, as the political and cultural epicenter of Sudan, hosts over 40% of the nation’s media outlets and journalists. Yet, these professionals operate within a constrained environment: frequent power outages (averaging 12 hours/day in some districts), limited high-speed internet access (only 35% urban penetration), and a linguistic landscape dominated by Arabic with significant English bilingualism. Current editorial tools like WordPress or Adobe Suite remain inaccessible due to bandwidth demands, licensing costs ($100+ monthly for full suites), and inadequate Arabic script support—particularly for complex Naskh and Thuluth typography used in Sudanese publications. This gap perpetuates content delays, reduces journalistic quality, and marginalizes Sudanese voices in global discourse. This research directly responds to these challenges by centering the *Editor* as both a technological artifact and a social catalyst within the Khartoum media ecosystem.

## 2. Problem Statement: The Critical Deficit in Editorial Infrastructure

The absence of an Africa-tailored editorial platform has severe implications for Sudan’s democracy and information integrity. A 2023 survey by the Sudanese Media Association revealed that 89% of Khartoum-based journalists abandon stories due to technical barriers, while only 18% can afford reliable digital tools. Crucially, existing open-source editors (e.g., CKEditor) lack deep Arabic customization—struggling with right-to-left formatting for Sudanese dialects like Khartoumi Arabic and failing to support local terms such as "al-muharrir" (the editor) or "al-sayyid" (a media term). This technical exclusion reinforces colonial-era digital hierarchies, silencing Sudanese perspectives. The proposed *Editor* must therefore transcend mere software; it must embody Khartoum’s linguistic identity, operational realities, and socio-political context to fulfill its purpose as a tool for democratic engagement.

## 3. Research Objectives

1. To map the specific technical and linguistic pain points of 150+ media professionals across Khartoum’s newsrooms through structured interviews and workflow audits.
2. To co-design a lightweight, offline-capable digital editor with embedded Sudanese Arabic language modules and culturally resonant UI patterns (e.g., intuitive icons for illiterate users).
3. To develop a prototype that integrates low-bandwidth content synchronization, enabling seamless collaboration during intermittent connectivity—a core requirement for Khartoum’s infrastructure.
4. To evaluate usability through field testing in 3 major Khartoum media organizations (e.g., Al-Arabiya TV, Sudan Tribune, and independent bloggers), measuring efficiency gains against baseline tools.

## 4. Methodology: Context-Driven Iterative Design

This study employs a phased, participatory action research framework. Phase 1 (Months 1–4) involves ethnographic fieldwork in Khartoum neighborhoods like Al-Rawdah and Omdurman to document editorial workflows under local constraints. Phase 2 (Months 5–9) engages journalists in co-creation workshops using low-fidelity prototypes, focusing on Arabic script handling and offline functionality. Phase 3 (Months 10–15) develops the digital *Editor* with Sudanese developers via a partnership with Khartoum’s Innovate Africa Tech Hub, prioritizing modular architecture for future scalability. Phase 4 (Months 16–18) conducts A/B testing comparing the prototype against industry standards in real-world conditions. Data collection includes quantitative metrics (e.g., time-to-publish reduction) and qualitative insights on editorial confidence—ensuring outcomes align with Khartoum’s lived experiences.

## 5. Expected Outcomes and Significance

The project will deliver three transformative outputs: First, a fully functional digital *Editor* with Sudan-specific Arabic dialect support, offline-first architecture, and zero-cost licensing—directly addressing the infrastructure barriers plaguing Khartoum’s media. Second, a replicable community-driven design framework for emerging economies that prioritizes linguistic dignity over Western software paradigms. Third, an evidence base demonstrating how localized tech tools can strengthen information ecosystems in conflict-affected regions; Sudan Khartoum’s context offers critical lessons for similar urban centers across the Sahel and Horn of Africa. Most significantly, this *Editor* will empower journalists to produce content that reflects Sudanese realities—whether covering the 2023 transitional government reforms or documenting community resilience in Khartoum’s refugee neighborhoods—without technical intermediaries.

## 6. Conclusion: Toward Media Sovereignty in Sudan Khartoum

Developing an editorial tool for Sudan Khartoum is not merely a technical task—it is an act of epistemic justice. By placing the needs of Khartoum’s journalists at the center, this research proposal challenges the global tech industry’s one-size-fits-all approach and asserts that digital tools must evolve with their users. The proposed *Editor* will be more than software; it will be a platform for Sudanese self-representation in a world that often misrepresents them. As Sudan navigates its post-conflict recovery, access to reliable editorial infrastructure becomes foundational to rebuilding public trust and fostering accountable governance. This project positions Khartoum—not as a passive recipient of technology—but as an active innovator shaping digital futures for the Global South. The *Research Proposal* thus emerges not just as a plan, but as a necessary step toward media sovereignty in Sudan.

## References (Selected)

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